

CLAIMS

1. The use as anti-UV agent, in a rubber composition, of titanium dioxide particles having an average size of at most 80 nm and at least partially coated with a layer of at least one metal oxide, hydroxide or oxohydroxide.

2. The use as claimed in claim 1, characterized in that said layer is a layer of at least one silicon and/or aluminum oxide, hydroxide or oxohydroxide.

3. The use as claimed in claim 2, characterized in that said layer is formed from silica, an aluminosilicate or alumina.

4. The use as claimed in one of claims 1 to 3, characterized in that said titanium dioxide particles have an average size of between 20 and 70 nm, in particular between 30 and 60 nm.

5. The use as claimed in one of claims 1 to 4, characterized in that the titanium dioxide has a predominantly anatase crystal structure.

6. The use as claimed in one of claims 1 to 5, characterized in that said titanium dioxide particles have a BET specific surface area of at least 40 m<sup>2</sup>/g, in particular at least 70 m<sup>2</sup>/g.

7. The use as claimed in one of claims 1 to 6, characterized in that said particles are used in powder form.

8. The use as claimed in one of claims 1 to 5 7, characterized in that said rubber composition is based on at least one elastomer, said elastomer preferably having a glass transition temperature of between  $-150^{\circ}\text{C}$  and  $+20^{\circ}\text{C}$ .

9. The use as claimed in one of claims 1 to 10 8, characterized in that said rubber composition furthermore includes at least one reinforcing filler and, optionally, at least one coupling agent and/or at least one coating agent.

10. The use as claimed in one of claims 1 to 15 9, characterized in that said rubber composition contains no carbon black.

11. The use as claimed in one of claims 1 to 10, characterized in that said rubber composition includes at least one organic antioxidant.

12. The use as claimed in one of claims 1 to 20 11, characterized in that the mass of titanium dioxide particles used is between 0.5 and 8%, preferably between 1 and 5%, of the total mass of said rubber composition.

13. A rubber composition based on at least one elastomer, containing at least one anti-UV agent, characterized in that said UV stabilizer consists of titanium dioxide particles having an average size of at

0076344.001501

most 80 nm and at least partially coated with a layer of at least one metal oxide, hydroxide or oxohydroxide.

14. The composition as claimed in claims 13, characterized in that said layer is a layer of at least one silicon and/or aluminum oxide, hydroxide or oxohydroxide.

15. The composition as claimed in claim 14, characterized in that said layer is formed from silica, an aluminosilicate or alumina.

16. The composition as claimed in one of claims 13 to 15, characterized in that said titanium dioxide particles have an average size of between 20 and 70 nm, in particular between 30 and 60 nm.

17. The composition as claimed in one of claims 13 to 16, characterized in that the titanium dioxide has a predominantly anatase crystal structure.

18. The composition as claimed in one of claims 13 to 17, characterized in that said titanium dioxide particles have a BET specific surface area of at least 40 m<sup>2</sup>/g, in particular at least 70 m<sup>2</sup>/g.

19. The composition as claimed in one of claims 13 to 18, characterized in that said composition is based on at least one elastomer having a glass transition temperature of between -150°C and +20°C.

20. The composition as claimed in one of claims 13 to 19, characterized in that said composition includes at least one reinforcing filler and,

optionally, at least one coupling agent and/or at least one coating agent.

21. The composition as claimed in one of claims 13 to 20, characterized in that said composition  
5 contains no carbon black.

22. The composition as claimed in one of claims 13 to 21, characterized in that said composition includes at least one organic antioxidant.

23. The composition as claimed in one of  
10 claims 13 to 22, characterized in that said composition has a weight content of titanium dioxide particles of between 0.5 and 8%, preferably between 1 and 5%.

24. A finished article based on at least one composition as defined in one of claims 13 to 23.

2025-11-19 14:34:00